

REMARKS

By the above amendment in the accompanying RCE, claims 15 - 22 have been canceled without prejudice or disclaimer of the subject matter thereof, claims 1 - 14 having been previously canceled, and new claims 23 - 34 have been presented, which recite features, as will be discussed below.

Although the Examiner has rejected claims 15 - 20 under 35 USC 103(a) as being unpatentable of Ishii (US 5,851,298) in view of Sugaya et al (US 6,518,548), applicants assume that the rejection was intended to be directed to claims 15 - 22, which claims have been canceled by the present amendment, such that the rejection as set forth by the Examiner is considered to be obviated. Insofar as such rejection is applicable to the present claims, such rejection is traversed, and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Turning to new independent claim 23, applicants note that this claim is directed to the structural arrangement of a plasma processing apparatus as illustrated in Figures 12 and 13 of the drawings, for example. More particularly, as shown in these figures, a stage 2, which is disposed within the vacuum chamber as illustrated in Fig. 1, includes a cooling jacket 63 (Fig. 13) provided at an inside thereof with a path for passing coolant liquid therethrough, and an upper member 15 (Fig. 13) which is attached on the cooling jacket and has a heater disposed at an inside thereof. As shown, the specimen is placed on the upper member and the plasma is formed in the space above the specimen. As recited in claim 23 and as illustrated in Fig. 13 and described at page 25, lines 1 - 19 of the specification, a first gap which is coupled to an inside introduction port 65 is disposed at an area on a

center portion of the stage between the cooling jacket 63 and the upper member 15, and a second gap coupled to an outside introduction port 66 is disposed at an area on an outer peripheral portion of the stage between the cooling jacket and the upper member, and has illustrated, each of the first and second gaps is sealed at an inside thereof. Although not illustrated in Fig. 13, first and second valves serve for supplying heat transfer gas with each of the first and second gaps, respectively, see for example, the valve 25 as shown in Fig. 2, so as to enable the pressure of the gas supplied within the first gap to be different from a pressure of the gas supplied within the second gap, as described at page 25, lines 10 - 17 of the specification.

Applicants note that as described in the specification, although no helium or heat transfer gas exit ports are shown, such are provided and appropriate valves such as valves 25 and 26 are provided for the entrance and exit of the heat transfer gas.

Additionally, claim 27 and other dependent claims recite the features, as more clearly illustrated in Fig. 12 and described at page 24, lines 3 - 15, of a first heater section 62 which is provided on the center portion of the stage within the upper member, and a second heater section 61 which is provided on the outer peripheral portion of the stage within the upper member, and which is separately provided from the first heater section. Applicants submit that the features, as described above, as set forth in independent claim 23 and the dependent claims are not disclosed or taught in the cited art.

Applicants note that with this structural arrangement, with the provision of the first and second gaps arranged in the manner set forth and enabling supply of heat transfer gas of different pressure thereto, a desired temperature distribution of the wafer can be easily obtained. That is, the thermal transfer property can be adjusted desirably between the upper and lower members of the stage at each of the center

portion and outer peripheral portion of the stage and likewise, by control of the first and second heater sections in addition to the control of the heat transfer gas in the manner set forth, appropriate temperature distribution of the wafer can be obtained in a wide range.

Turning to Ishii, assuming arguendo, that as shown in Figure 1 thereof, for example, a gap is provided between the member 10 and the member 6 thereof with helium gas being supplied to the gap, which is sealed by the seal members 8, only a single gap is provided which essentially extends from the center to the periphery. Thus, Ishii fails to disclose or teach first and second gaps and first and second valves for supplying heat transfer gas to the first and second gaps, respectively. Applicants further note that Ishii apparently discloses a single heater 16 which extends from the center to the periphery of the stage, such that Ishii also does not disclose or teach first and second heater sections, as recited in the claims of this application. Thus, applicants submit that claim 23 and the dependent claims patentably distinguish over Ishii in the sense of 35 USC 103 and should be considered allowable thereover.

The Examiner has cited Sugaya et al for disclosing a heater wherein an outer circumferential end of the heater is positioned outwardly from an outer end of the protrusion portion 2a. Irrespective of this disclosure in Sugaya et al, applicants note that Sugaya et al, in addition to failing to disclose first and second gaps, in the manner recited in claim 23 and the dependent claims, also fails to disclose or teach first and second heater sections, arranged in the manner defined in the dependent claims of this application. Accordingly, applicants submit that claim 23 and the dependent claims patentably distinguish over Sugaya et al in the sense of 35 USC 103 and with regard to any proposed combination of Ishii and Sugaya et al, it is


readily apparent that such combination does not provide the claimed features of claim 23 and the dependent claims thereof. Accordingly, applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 USC 103.

For the foregoing reasons, applicants submit that claim 23 and the dependent claims recite features not disclosed or taught in the cited art and should be considered allowable thereover. Accordingly, issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.41374CX2), and please credit any excess fees to such deposit account.

Respectfully submitted,

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